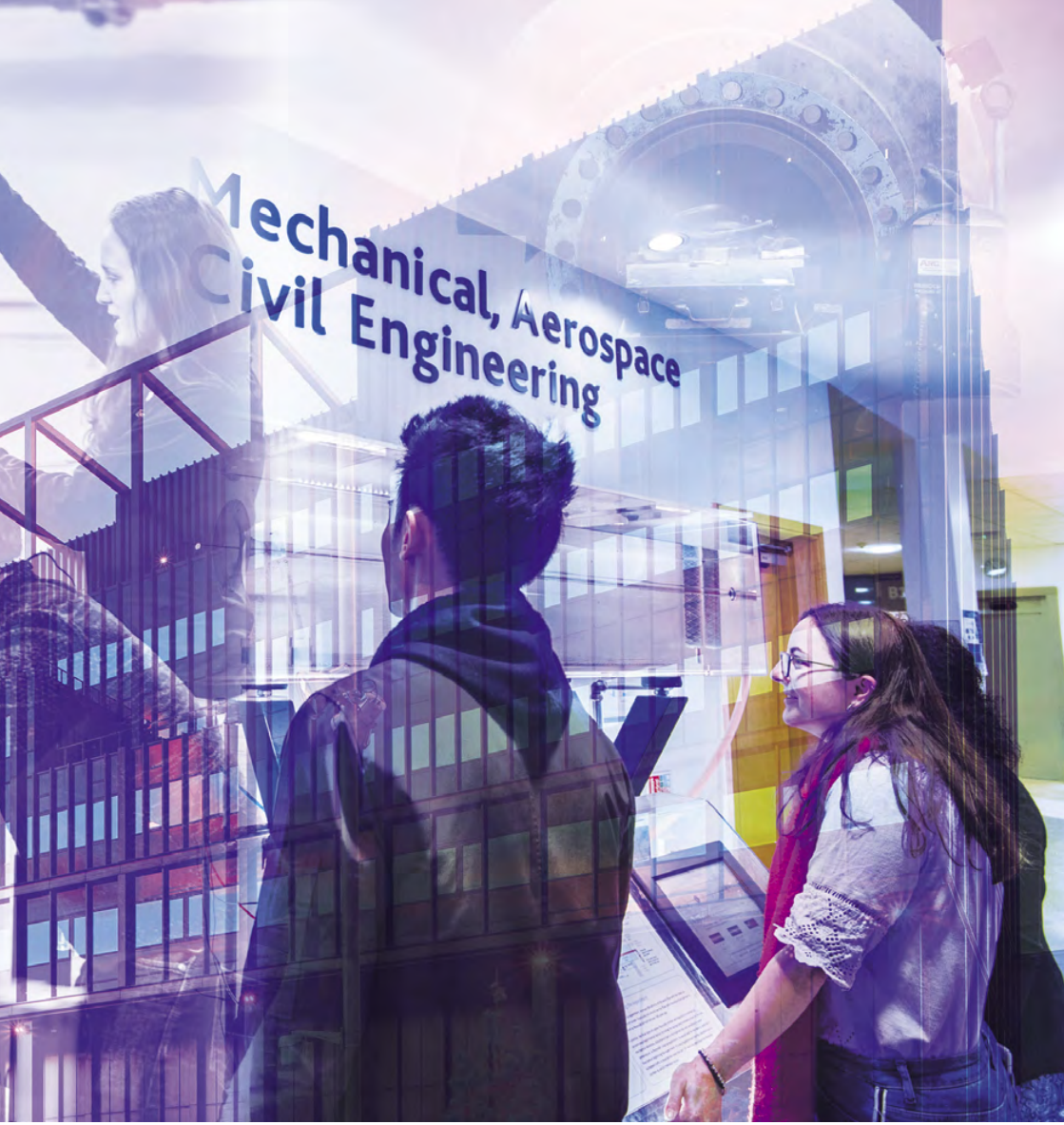
MANCHESTER 1824

The University of Manchester

# Civil Engineering

**UNDERGRADUATE BROCHURE**




In our Civil Engineering programmes, we aim to prepare and equip future generations of civil engineers with the right set of skills to address some of the biggest challenges our planet has ever known, including climate change, rapid urbanisation and achieving net zero greenhouse gas emissions by 2050.

Our teaching staff work at the forefront of research and deliver world-class teaching in key areas including: structures, engineering materials, geotechnics, hydraulics, sustainability and climate change. You will also develop skills in designing complex structures in harsh environmental conditions, think about offshore wind farms, nuclear power plants, bridges and tunnels.

Study this course at Manchester and you'll also benefit from our impressive industrial links which help shape our teaching curriculum and offer our students a valuable experience in the workplace before graduating.


# Why Manchester

Ranked 5th in the UK for Civil Engineering
(QS World University Rankings 2022).

We have strong industry links with companies such as AECOM, Arup, EDF Energy, and our graduates go on to work for the biggest names in engineering and beyond.

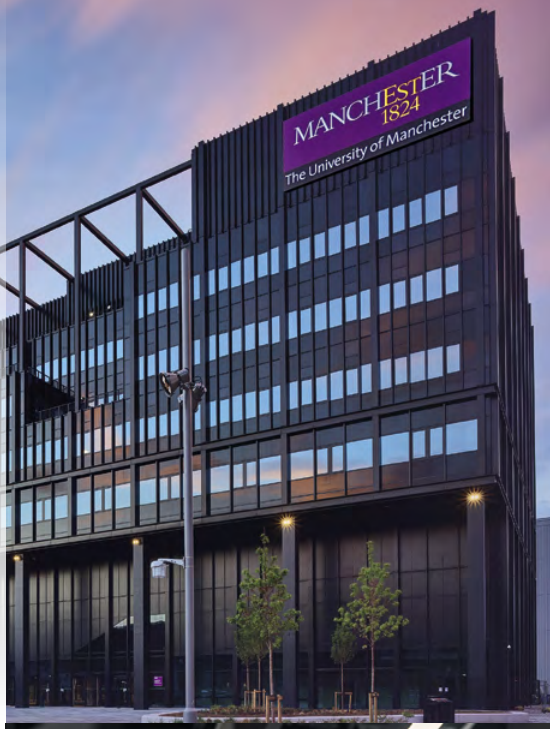
Undertake design projects in each year, and study both core subjects such as structural, fluid and soil mechanics, and emerging subjects that address today's key issues, like climate change.

All of our courses are accredited by the Joint Board of Moderators (JBM), formed by four professional bodies; Institution of Civil Engineers, Institution of Structural Engineers, Chartered Institution of Highways and Transportation (CIHT), and the Institute of Highway Engineers.

**Read more about why Manchester should be your first choice here:**
**uom.link/ug-civil-why-mcr**

*"It s in the makerspace that we come together, and our ideas come to life! You can tell it s designed with Engineering and Materials students in mind, because it s the perfect place to collaborate, connect, and create with each other!"*

**Olivia Del Pino Herrera, Engineering Student**




# Our campus

Come to our new home for Engineering and Materials; a place like no other. This is where engineers, material scientists and fashion students collaborate, innovate and make their mark on the world. Unleash your potential in our creative, academic playground that signals the evolution of a proud history of innovation spanning almost 200 years.

In this very special place, we're ripping up the rule book, offering you a truly innovative teaching and learning experience. As well as our creative classrooms, you'll also have access to world-leading sustainable research facilities. There are a world of possibilities, whether you are interested in aerospace, robotics, or sustainable fashion, there's a home for you here.

Manchester is synonymous with the Worker Bee and our Makerspace will be the hive of activity. It's led by students, for students, as the place to connect and tackle real-life challenges together with support from across our disciplines.

Our new home for Engineering and Materials is equipped and ready for students to unleash their potential.

uom.link/ug-civil-campus

## Our courses

Civil Engineering BEng

Civil Engineering MEng

Civil and Structural Engineering MEng

Civil Engineering (Enterprise) MEng

Civil Engineering with Industrial Experience MEng

Civil Engineering with an Integrated Foundation Year

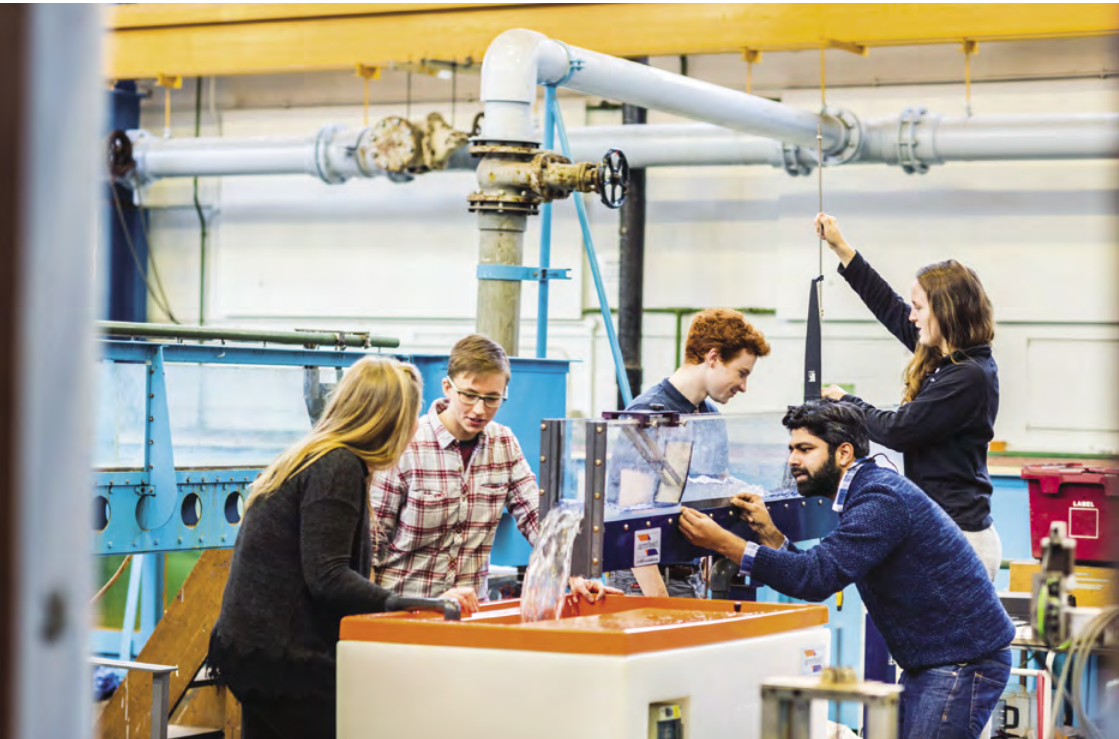
### FLEXIBLE OPTIONS

Our courses have a common first year and mainly common second year, giving students the flexibility to transfer to their chosen course up to the end of Year 2, when they are better informed about the pathways and have a deeper understanding of each specialisation. Choose from our optional units which include: nuclear systems, sustainable development, renewable energy systems, sustainable waste management and tools and techniques for enterprise.

### FOUNDATION YEAR AVAILABLE

You can prepare for the full degree course if you do not have the appropriate qualifications for direct entry by undertaking our foundation course first.

**Find out more about the different courses and options on offer on our department website: uom.link/ug-civil**



# What you'll learn

Today's world relies more than ever on inventive and resourceful civil engineers to design, build, and maintain the infrastructure in which we live. At Manchester, our technical degrees prepare you to help build a better world – with a strong emphasis on development and application of mathematical theories and computational methods to the analysis of real infrastructure.

Civil Engineering at Manchester takes a hands-on approach, where you can expect lectures to be accompanied by both practical and laboratory activities. Within our programmes, we offer over 60 different units that build upon four core subjects, namely: structures, materials, geotechnics, and hydraulics. Within this are further specialised disciplines, including sustainability, nuclear, renewable systems, climate change, and enterprise.

In your first two years, you will develop a strong understanding of essential topics, from structural analysis, hydraulics, and geotechnics to construction materials, engineering design, project management, and mathematics – all using our fantastic array of facilities and equipment. From Year 3, you will have the opportunity to choose from a range of optional units, including nuclear systems, sustainable development, renewable energy systems, sustainable waste management, and tools and techniques for enterprise.

You will undertake an individual research project in Year 3, where you will have the flexibility to study emerging subjects and carry out novel research alongside our world-leading academics.

# Special features

### INDUSTRIAL EXPERIENCE

Competition in the graduate job market has risen dramatically over the last ten years, and students are increasingly looking for ways to differentiate themselves. An excellent way to do this is by choosing an industrial placement as part of your degree course. This involves spending a year working in industry, typically after your third year of study. As well as the salary that you earn during your placement, you also gain practical experience that can be invaluable both in your final-year project and when competing for graduate jobs.

### ENTERPRISE

Many professional engineers will find themselves in positions of responsibility. Projects must be planned, costed and managed, and products must be designed, manufactured and marketed in the real world. An engineer is thus often required to possess skills in management, decision-making and finance. We collaborate with the Alliance Manchester Business School to offer Civil Engineering (Enterprise), which provides students with additional knowledge and skills in engineering management.

Read more about your options: **uom.link/ug-civil-study**

### FACILITIES

Our well-equipped laboratories include state-of-the-art facilities such as:

- Heavy structures and concrete labs
- Hydraulics tanks
- Structural testing
- Fire testing labs.

### FIELD TRIPS

In Year 2 you will attend a four-day field trip to Patterdale, a small village in the iconic Lake District, where you will put into practice the surveying methods you've learned in the classroom.

### OUR STUDENT COMMUNITY

We have numerous societies and groups that you can get involved with offering activities from volunteering and quiz nights to netball and football. Our student run UMCES (University of Manchester Civil Engineering Society) also organises site visits, industrial talks and networking opportunities. WES (Women in Engineering Society) promotes women in all specialties of engineering and organises social events, mentoring schemes, networking opportunities and outreach programmes.

**uom.link/ug-civil-students-union**

Our YouTube channel includes videos about our department, our courses and our students:
**uom.link/ug-civil-vid**

## Open days

The University holds undergraduate open days regularly where you have the opportunity to find out more about our courses, the support we offer and see our facilities. Attending an open day is a great way to find out what studying at Manchester is like.

For information about our open days visit:
**uom.link/ug-civil-open-days**

*"The idea of being able to use my skills to help improve the lives of others, while also advocating for sustainability in the process, caught my eye as civil engineering impacts them on such a large scale."*

**Bea Basa / BEng Civil Engineering**

Read more about Bea's time at Manchester: **uom.link/ug-civil-bea**

# Employability and careers

Within the first 15 months, 95% of our Civil Engineering graduates are successfully employed or engaged in further study (Graduate Outcomes Survey, 2019). As the most targeted University by graduate employers (Highfliers report 2022), Manchester is the perfect place to lay the foundations for your future.

Here you'll be equipped with the sought-after skills, close industry links, and world-class education set to give you a head-start. With placement opportunities, internships, events, and a career service always on-hand, you can benefit from our enviable track record of graduates quickly moving into established engineering consultancies and organisations.

See what our graduates have to say about their time at Manchester: **uom.link/ug-civil-grads-vid**

### WHAT OUR GRADUATES DO

- Civil Engineer
- Structural Engineer
- Geotechnical Engineer
- Principal Engineer
- Environmental Engineer

### WHERE OUR GRADUATES WORK

- Arup
- Atkins
- Aecom
- Buro Happold
- Mott McDonald
- Network Rail

Find out about the careers opportunities the University and our department offer, so that you graduate with a range of skills and experience: **uom.link/ug-civil-highfliers**

## Get in touch

Department of Mechanical, Aerospace and Civil Engineering
The University of Manchester
Engineering Buildings A and B
Oxford Rd
Manchester
M13 9PL
United Kingdom

t +44 (0)161 543 4015
e **ug-mace@manchester.ac.uk**
w **manchester.ac.uk/mace**

**@uom_mace**

**@uommace**

**uom.link/ug-civil-blog**

Royal Charter RC000797

**DISCLAIMER**
This brochure was produced in 2022. It has therefore been produced in advance of course starting dates. For this reason, course information, including course content, may be amended prior to your applying for a place on a course of study. There are a number of reasons why changes to course information and/or published term dates may need to be made prior to your applying for a place on a course. These may include, but are not limited to: the need to make reasonable changes to the content and teaching offered in relation to any course for operational and/or academic reasons; the withdrawal of courses due to insufficient numbers; a course not receiving the required accreditation; and/or interruption or loss of key services due to circumstances beyond our control, including fire, flood or other operational issues. **Prospective students are therefore reminded that they are responsible for ensuring, prior to applying to study at The University of Manchester, that they review up-to-date information by searching for the relevant course at uom.link/fse-ug-courses**

**INDUSTRIAL EXPERIENCE DISCLAIMER**
Some aspects of the industrial experience programmes may continue to be impacted by the COVID-19 pandemic. The situation is fast-moving and dynamic and may require adjustments at short notice.
**For up-to-date information please visit: uom.link/fse-ug-study**

**FIELDWORK DISCLAIMER**
The Department aims to run advertised fieldwork and we very much hope that students will be able to enjoy the fieldwork experience in the usual way. The ability of fieldwork to proceed, and whether any changes to proposed fieldwork might be necessary, will remain subject to COVID-19 restrictions and based on the U.K. government guidelines. We will therefore assess on a regular basis the viability of any travel and fieldwork and communicate any decisions to our students at the earliest possible opportunity.